October 12, 2001

Magalie Roman Salas,
FCC Secretary
Office of the Secretary
Federal Communications Commission
The Portals, 445 Twelfth Street, S.W.
Washington, D.C. 20554

RE: WT Docket 01-146, Amendment of Part 90 of the Commission's Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band

Dear Ms. Salas:

Enclosed are comments and 4 copies submitted by the American Water Works Association in response to the Federal Communication Commissions request for comments on WT Docket 01-146, Amendment of Part 90 of the Commission's Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band.

AWWA appreciates the opportunity to offer the attached comments on this important rulemaking.

Best regards,

Thomas W. Curtis
Deputy Executive Director

Attachments

F:\HOME\SV\TELCON\Wt99-87\FINAL Comments on WT99-87.doc

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Commission's Rules and Policies for	)	
Applications and Licensing of Low Power	)	**WT Docket 01-146**
Operations in the Private Land Mobile	)	
Radio 450-470 MHz Band	)	

To: The Commission

COMMENT

American Water Works Association
Thomas W. Curtis
Deputy Executive Director
1401 New York Avenue, N.W., Suite 640
Washington D.C. 20005

Dated: 12 October 2001

Table of Contents

EXECUTIVE SUMMARY

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to the improvement of drinking water quality and supply. AWWA represents approximately 4,400 drinking water systems, many of which operate radio systems for voice and/or data transmission. Drinking water utilities have used the 450-470 MHz band for both voice and radio-based SCADA systems. The installation of radio-based SCADA systems in this band was driven by the cost-prohibitive nature of equipment in other bands and over the last decade by the lack of access to MAS spectrum due to competitive pressure in urban markets, spectrum freezes and allocation to other uses. Consequently, AWWA's comments represent those of incumbent users with interests in both voice and data applications.

AWWA believes that the Commission's proposal is generally appropriate. As the Commission noted, resolution is needed on several issues to prudently implement the proposed action:

- Group A applicants should avoid interference with all other users including low-power users and those in adjacent areas that are not eligible for licenses allowing higher ERP.
- Non-voice uses should continue to be allowed within the Group A channels as secondary users.
- Group B channels as "data only" is appropriate unless the FCC proposes a system to ensure a protected service area for the data applications.
- Placement of fixed site data transmission within Group C channels will create unresolvable conflicts.
- Incumbent operations in proposed Group C channels should be given at least seven years to migrate to new channels.
- Manufacturers of radios used on Group C channels should be limited to only the 25 Group C channels and UHF color dot and start dot frequencies.

INTRODUCTION

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to the improvement of drinking water quality and supply. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our 57,000 plus members represent the full spectrum of the drinking water community: treatment plant operators and managers, environmentalists, scientists, academicians, and others who hold an interest in water supply and public health. Our membership includes approximately 4,400 water systems that supply water to roughly 80 percent of the people in the nation.

Drinking water utilities are public safety service entities that serve individual communities of with specific geographic and jurisdictional boundaries. Drinking water utilities are a critical component of our nation’s infrastructure and as such play an vital role in ensuring public safety. Water operations at typical public water systems (PWS) involve specific telecommunication

applications in the treatment and distribution of drinking water. For these applications, the most effective medium is radio:

- Voice
- Data collection and control (Supervisory Control and Data Acquisition, known as SCADA)
- Video

Operational facilities at typical PWS include:

- Treatment plants
- Pumping stations
- Storage reservoirs and tanks
- System valves and regulators
- Flow, pressure, and quality
- monitoring

These facilities are dispersed over large geographic areas routinely measured in square miles and in some instances involving facilities separated by many miles. Drinking water systems operate both voice and data systems in the 450-470 MHz band. Data systems include:

- SCADA systems and
- Internal radio communication systems for dispatch and operations.

Both SCADA and voice operations within drinking water utilities are essential to routine operations that are fundamental to protecting public health, management of system security, and response to emergencies.

As a local service provider, drinking water utilities are managed by local government and state regulatory agencies, which control both the scope of their activities and supporting rate structures. Failure by the FCC to follow Congress's direction to provide (1) useful spectrum allocation for drinking water utility and other public safety radio service entities and (2) exemption from auction so that spectrum is available at a reasonable cost will both impede drinking water utilities' ability to meet federal water quality standards for human consumption and negatively impact their ability to support fire protection.

COMMENTS

AWWA has reviewed the Federal Communication Commission's (FCC) September 12, 2001, proposal to amend Part 90 of the Commission's rules and policies for applications and licensing of low power operations in the Private Land Mobile Radio (PLMR) 450 - 470 MHz band. AWWA is not a member of the Land Mobile Communications Council (LMCC) and has not previously provided comment on the LMCC petition.[1] AWWA believes that the Commission's proposal is generally appropriate. In its proposal the Commission did seek comment on several issues which AWWA believes are critical to prudent implementation of the proposed action. AWWA offers the following comments on these key issues as described in the full text of the Commission's Notice of Proposed Rule Making, (NPRM), FCC 01-199 in WT Docket No. 01-

[1] Land Mobile Communications Council Petition for Rule Making (RM-9966), September 11, 2000.

146, as adopted July 2, 2001. AWWA's comments reference the FCC NPRM paragraph numbering system.

Paragraphs 1

The LMCC petition allocates spectrum usage to specific channels. As a consequence, existing licensees will need to move to different channels. In some instances, these changes will take place in an uncoordinated spectrum. Incumbent operations should be given a reasonable period of time to migrate to new channels. That period should be no less than seven years. In uncoordinated areas, uses that are currently secondary in nature (i.e., telemetry systems), should have the option of attempting coordination with new and existing primary users in the event interference occurs within the migration period.

Paragraphs 9 and 10

The LMCC petition sought to ensure that user conflicts are minimized and spectrum use in the 450-470 MHz band by setting an effective radiated power (ERP) limit on applicants. This approach preserves the band for low power users and minimizes interference. AWWA agrees with the LMCC petition goals, but believes that the FCC is correct, in that the current transmitter output power (TPO) limits on maximum power are a more practical regulatory construct in this band. In setting spectrum aside for low power applications users, there is not only an intent to efficiently use spectrum but to provide low-barrier access to spectrum. The users anticipated in much of this rulemaking (i.e., rural utilities, construction companies, etc.) are typically less sophisticated FCC applicants who would find the complexity of the ERP analysis to be a barrier to entry. It would be useful within the TPO regulatory structure to have reasonable restrictions on tower height as a means to reduce interference.

Paragraphs 13 and 15

The LMCC proposal to allow up to 20 watts on some channels within Group A effectively removes these channels from the group of channels available for low power operations. AWWA supports allowing high power operation in these channels if (1) allowed uses of these channels continues to include data transmission, (2) these channels remain within the Industrial / Business Pool, and (3) are subject to geographic licensing, and (4) continues to be unaffected by the Balanced Budget Act of 1997 obligation to award licenses by auction.[2]

If the allowable power level in Group A rises to or exceeds 20 watts ERP, then ERP analysis and coordination of licenses is warranted.

Paragraph 16

Setting a new definition of "urban area" would add an additional and unnecessary level of confusion to the licensing process. Likewise, the cutoff-point at the top 20, 50, 100 urban markets is largely an arbitrary decision. AWWA members are experiencing "urban" interference problems in even much smaller communities, therefore, AWWA recommends that the urban market cutoff not be reduced from the top 100 urban markets as proposed.

[2] Notice of Proposed Rule Making, (NPRM), FCC 01-199, July 2, 2001, Paragraph 6.

Paragraph 17
In this paragraph the FCC asked if low power mobile / portable operations extending outside the "fifty mile circles" associated with the 40 channels identified in Group A for applicants within 50 miles of top 100 urban areas should be considered in coordination analysis. AWWA believes that coordination analysis should extend beyond the "fifty mile circles." Interference with other users should be avoided and should not be limited to like applicants, but include low-power users including those in adjacent areas that are not eligible for licenses allowing higher ERP.

Paragraph 18 and 30
The proposed Group B dedicated to non-voice, coordinated uses is important and necessary, but it should not preclude the use of available Group A channels for data transmission. Non-voice uses should continue to be allowed within the Group A channels as secondary users.

Paragraph 19
AWWA supports the designation of a group of channels for non-voice, coordinated use. Utilities have used the 450-470 MHz band for installation of radio-based SCADA systems. This application was necessary in the 1980s when 900 MHz multiple address systems technology was cost-prohibitive. Installation of SCADA systems in this band continued over the last decade due to lack of access to MAS spectrum which has been unavailable due to competitive pressure in urban markets, spectrum freezes and allocation to other uses. Consequently, there are many drinking water utilities that currently employ SCADA systems relying on radio communication in this band for data transmission. The proposed 10 channel set aside provides an important safe harbor for these systems.

Applications within Group B should include continuous data transmissions. While many SCADA applications do employ a polling system that does not necessitate a continuous data transfer, there are numerous applications currently taking place within the 450-470 MHz band that require continuous data transmission.

Paragraph 20
The Group B channels should be free from interference. These 10 channels would be the only channels in the 450-470 MHz band where data transfer applications would not be secondary uses. Voice communication on these channels that was uncoordinated with data transmission applications could lead to serious conflicts. Therefore, designation of the Group B channels as "data only" is appropriate unless the FCC proposes a system to ensure a protected service area for the data applications.

Paragraph 23
Itinerant applications on the relevant channels would pose a substantial risk to medical telemetry. The Group C channels that are currently in use for medical telemetry should be made available to itinerant applications after the current transition period for medical telemetry has expired.

Paragraph 24
Fixed application is inconsistent with the conceptual basis underlying Group C for itinerant applications. The Commission's argument that the itinerant radio locations are highly mobile

and not subject to coordination is sound. Placement of fixed site data transmission within these channels would in effect create irresolvable conflicts.

Paragraph 25

It is appropriate to require manufacturers of radios used for the pertinent channels to be limited to only the 25 Group C channels and UHF color dot and start dot frequencies.

Paragraph 26

Incumbent operations should be given a reasonable period of time to migrate to new channels. That period should be no less than seven years.